DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-011358 Address: 333 Burma Road **Date Inspected:** 07-Jan-2010

City: Oakland, CA 94607

OSM Arrival Time: 1900 **Project Name:** SAS Superstructure **OSM Departure Time:** 700 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island Contractor: **Location:** Shanghai, China

CWI Name: See Below **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS: Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component:** OBG and Tower

Summary of Items Observed: CWI Inspector: Mr. Du Zhi Qun

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

Blast Shop #1

This QA Inspector performed random visual inspections of the upper internal surfaces on OBG Segment 7CW between OBG panel point (PP)54 and panel point PP55 as per ZPMC Notice of Inspection request number 2423. ZPMC had recently completed grit blasting, prior to application of paint, and the steel surfaces that were inspected were mostly free of rust oxide and other contaminants that had previously obscured portions of the plates and weld surfaces. This QA Inspector visually observed approximately 50 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, and other minor surface rejections. The areas were marked with colored chalk and ZPMC workers used electric grinders to remove the visually unacceptable areas and ZPMC performed magnetic particle inspections of the arc strike removal areas after they were removed. This QA Inspector observed a base material gouge in the second "U" rib of deck panel DP89 closest to corner assembly CA37 at panel point PP57 which will require a welding repair. This gouge appears to be approximately 4 mm deep and this QA Inspector placed a piece of gray tape over the area to ensure the area is not painted prior to completion of the weld repair.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Tower Bay 10

This QA Inspector observed ZPMC welder Ms. Dong Yumei stencil 054069 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1K/L-71. This weld is located inside South tower lift 4 near the double diaphragm at elevation 143 meters. This QA Inspector observed that ZPMC QC Inspector Mr. Guo Zhi Chun is monitoring this welding. This QA inspector measured a welding current of approximately 250 amps and 24 volts and Ms. Dong Yumei appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Ms. Dong Yuqin, stencil 053116 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1K/L-72. This weld is located inside South tower lift 4 near the double diaphragm at elevation 143 meters. This QA Inspector observed that ZPMC QC Inspector Mr. Guo Zhi Chun is monitoring this welding. This QA inspector measured a welding current of approximately 240 amps and 25.5 volts and Ms. Dong Yuqin appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Yu Jun, stencil 201825 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1J/L-121. This weld is located inside South tower lift 4 near the double diaphragm at elevation 139 meters. This QA Inspector observed that ZPMC QC Inspector Mr. Guo Zhi Chun is monitoring this welding. This QA inspector measured a welding current of approximately 210 amps and 24.3 volts and Mr. Yu Jun appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Bi Chun stencil 040343 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1J/L-122. This weld is located inside South tower lift 4 near the double diaphragm at elevation 139 meters. This QA Inspector observed that ZPMC QC Inspector Mr. Guo Zhi Chun is monitoring this welding. This QA inspector measured a welding current of approximately 210 amps and 24.4 volts and Mr. Bi Chun appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Yang Guilong, stencil 068919 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1I/L-119. This weld is located inside South tower lift 4 near the double diaphragm at elevation 135 meters. This QA Inspector observed that ZPMC QC Inspector Mr. Guo Zhi Chun is monitoring this welding. This QA inspector measured a welding current of approximately 210 amps and 24.0 volts and Mr. Yang Guilong appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Nie Baofeng, stencil 68864 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1I/L-120. This weld is located inside South tower lift 4 near the double diaphragm at elevation 135 meters. This QA Inspector observed that ZPMC QC Inspector Mr. Guo Zhi Chun is monitoring this welding. This QA inspector measured a welding current of approximately 220 amps and 25.0 volts and Mr. Nie Baofeng appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

This QA Inspector observed ZPMC welder Mr. Li Wenguan, stencil 68916 is using flux cored welding procedure WPS-B-T-4333-T-P5-F to make weld SSTL4-1H/L-122. This weld is located inside South tower lift 4 near the double diaphragm at elevation 131 meters. This QA Inspector observed that ZPMC CWI Mr. Du Zhi Qun is monitoring this welding. This QA inspector measured a welding current of approximately 220 amps and 25.0 volts and Mr. Li Wenguan appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer